An Incomplete Contract Interpretation of the first Greek Bailout in 2010

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An Incomplete Contract Interpretation of the first Greek Bailout in 2010

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《**Abstract**》

Applying the concept of incomplete contract, this paper analyzes how the European Union had moved to resorting to Article 122(2) Treaty on the Functioning of the EU in bailing out Greece in May 2010, shifting from its long-held position of prohibiting the EU or member states from financially assisting any eurozone state in difficulties.

Ⅰ Introduction

This is an incomplete contract interpretation of the first Greek bailout in May 2010. It is assumed here that any European Union (the EU) member state entering the eurozone, accepting the Stability and Growth Pact (the SGP), is signing a contract with the EU. The SGP is a Treaty on the Functioning of the EU (TFEU). It specifies the conditions that all euro member states must abide by.

However, any treaty or any contract is incomplete due to "the difficulties

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of describing and verifying contractual performance" (Bolton, 1990: 303). The principal, the European Commission (the Commission), has difficulty making ex ante an application of the no bail-out clause, Article 125 TFEU, contingent on a future state in a verifiable and enforceable way in an initial contract.

The Commission similarly has difficulty making ex ante an application of Article 122(2) TFEU contingent on a future state in a verifiable and enforceable way. Contrary to Article 125 TFEU, Article 122(2) TFEU permits the Union or member states to financially assist other eurozone states in severe difficulties in some exceptional cases. "[I]t was common knowledge that the two parts of the Maastricht settlement were out of sync" (Craig, 2013:464). The no bail-out clause was "quid pro quo" for the fiscal sovereignty in the EU state. Especially in the eurozone, while being subject to fiscal policy guidance and coordination by the Commission as well as to fines in case of egregious violation of the SGP deficit limit, each state retains fiscal sovereignty. As a natural corollary to this, any financial assistance to a member state is prohibited. Nevertheless, Article 122 (2) TFEU allows financial assistance by the Union and other member states to a member state in severe difficulties in such exceptional cases that exceed the member state's ability to cope (Craig, 2013:460).

The parties to the SGP had made an initial contract that gives the no bail-out clause the principal weight and gives Article 122(2) TFEU the countervailing one. But after a bad state such as the Greek sovereign debt crisis broke out, choosing the course of action stipulated ex ante in the initial contract, i.e. not bailing out, became ex post inefficient. The eurozone was threatened as a whole, unless Greece had been bailed out. The European Council and the Greek renegotiated the terms of the initial contract to undo this ex post inefficiency and signed the final one, including

bailing out Greece under Article 122(2) TFEU under strict conditions. This shift in policy is here analyzed by applying the conceptual framework of incomplete contract theory. This is an attempt to interpret real world affairs, using the basic concepts of incomplete contract theory.

Incomplete contract theory has been developed especially in 1980s and 90s. Tirole defines an incomplete contract in his 1999 article:

> [A]t this stage an incomplete contract is rather defined as ad hoc restriction on the set of feasible contracts in a given model (Tirole, 1999:743).

On the other hand, he lists difficulties involved in complete contracting:

> The important feature of complete contracting is that the only impediments to perfectly contingent contracting are that the agents may have private information at the date of contracting . . . receive future information that cannot be directly verified by contract enforcement authorities . . . and that agents may take actions that cannot be verified (Tirole, 1999:754).

But he maintains: "There is no limitation on the parties' ability to foresee contingencies, to write contracts, and to enforce them" (Tirole, 1999:754).

While incomplete contracting has attracted a lot of attention among game theorists, it has also been subject to extensive criticism (Tirole, 1999:741-81).[2)]

2) Tirole considers irrelevant one of the major hypotheses of incomplete contract theory, indescribability of contingencies, in a game of R & D. He shows that by using "number-

Incomplete contract theory incorporates renegotiation in its model. This concept of renegotiation seems to match well with what actually happened in the first Greek bailout case. Greece accepted all the rules it had to abide by as a member of the Eurozone including the no bail-out clause. But it later reported fault deficit figures, violating the rules. Its disclosures in the aftermath of the Lehman shock led to speculative attacks against Greece in financial markets, leading to the sovereign debt crisis. The Council and Greece renegotiated the bailout despite the no bail-out clause and reached terms to save the eurozone as a whole.

The idea of incomplete contracting is limitedly used here as a frame of reference to interpret what has actually happened in the real world, i.e. the Greek bailout.[3] Incomplete contract theory seems to work better in explaining cases of failed contacts in the real world.

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based-payoff functions" rather than "action-based-payoff functions", "the problem of indescribability of contingencies" can be overcome (Tirole, 1999: 756-8).

In addition, he maintains: "[U]nder some conditions indescribability is irrelevant" and "[T]he central question of whether ex ante indescribability restricts the set of payoffs that can be obtained through contracting boils down to the question of whether an optimal contract under describable contingencies would ever prescribe different payoffs in two states of nature in which the parties have the same preferences. If the answer is negative, then indescribability is irrelevant" (Tirole, 757: 1999). He shows it to be irrelevant under the two assumptions of "(a) *[s]tate independence of the ratios of marginal utilities of money*" and "(b) *[u]nidentifiability of effort.*" He maintains: "It is therefore intuitive that, *under these two assumptions (and some innocuous ones), indescribability is irrelevant*" (Tirole, 1999: 757-8).Tirole's critical review of incomplete contract theory is very powerful. My objective in this paper is to use major hypotheses of incomplete contract theory only to interpret the real world affair, the Greek first bailout. Tirole himself admits: "Almost every economists would agree that actual contracts are or appear quite incomplete" (Tirole, 1999: 741).

3) Tirole explains why incomplete contracts have attracted a lot of attention: "The recent upsurge of incomplete contract models has been partly motivated by a perception that the principal-agent model and its variants predict contracts that, on the one hand, are 'too powerful' in that they underestimate the difficulties involved in real world contracting, and on the other hand, lack realism. Yet . . . the indescribability of contingencies, does not per se invalidate the classical approach to contracting" (Tirole, 1999:761).

How is the no bail-out clause an incomplete contract? There is a difficult problem involved in making legal principles and economic reality compatible with each other. This was the situation political leaders faced in the first Greek bailout. Making a compromise on a legal principle to cope with an economic urgency is not an easy task. Herdegen points out the dilemma of this:

> Economic wisdom is what economic science in a given moment suggests, as economically sound. Freezing institutional rules and substantive principles on this basis implies an obvious risk which is inherent in all dictates of economic wisdom: subsequent falsification by new empirical messages or any scenarios which have not been anticipated (Herdegen, 1998:9).

By depriving a member state of any hope that the Union or other member states will come to its rescue, the no bail-out clause leaves every member state on its own and puts it under strict financial discipline. It aims at deterring any member state from taking prodigal fiscal policy and consequently from financially free-riding on the Union or other member states.

This is an approach to default from purely a legal point of view. Spill-over effects from default, however, would force the Union and other member states to bail out a member state in sovereign debt crisis. Verde points out:

> [H]owever, according to many economists the no bail-out clause is inevitably meaningless. Indeed, when a Member State is experiencing a speculative attack and impaired access to private credit, it is difficult to conceive how the Union – that is the ECB or other Member States –

could refuse it. (Verde, 2011:155).

Being financially interlinked all together, they were unable to leave a member state to face default on its own. Dissolving themselves from legal responsibility alone would not work and would become ex post inefficient.

Heipertz and Verdun point out: "The Maastricht Treaty is hence from the very outset an incomplete contract as far as rules on EMU are concerned" (Heipertz and Verdun, 2012:80). Craig offers a concrete explanation for this view: "[T]he ESM [the European Stability Mechanism] was addressing a problem that was not envisaged by the treaty framers" (Craig, 2012:473). Incomplete contract theory describes this point as indescribability of contingencies or "*[u]nforseen contingencies*" in Tirole's terms (Tirole, 1999: 743). Due to the difficulty in foreseeing contingencies, incomplete contract theorists maintain that contracts become incomplete.[4)]

As is pointed out above, a typical example of unforeseen contingencies was the establishment of the ESM. It is the European version of the IMF set up after the Greek crisis to fill the gap left open by the Maastricht Treaty, which lacked a bail-out mechanism.

Craig argues that to make necessary room for the ESM to be compatible with Article 125 TFEU, the latter "should be narrowly construed in this instance." He pointed out that Article 125 TFEU "was designed with individual cases in mind, preventing bailouts of particular states when national fiscal policy or irresponsibility led to problems confined to that state" and that "Article 125, and the more general schema in Articles 122

4) Tirole criticizes this assumption itself: "At the very least they know how payoffs relate to the initial contract and investments . . . dynamic programming implies a minimum amount of foreseeability, namely that of payoffs, even if we make the assumption that parties do not know how and under what circumstances these payoffs will be achieved" (Tirole, 1999:744).

to 126, was not on this view structured so as to cope with the circumstance when the very future of the euro was at stake" (Craig, 2013:473). Thus, Article 125 TFEU has not been formulated to cover any systemic risk. This is the reason for considering the no bail-out clause to be an incomplete contract.

Ⅱ Theoretical review

1 Unforeseen contingencies and transaction cost:

Hart and Moore point out how contracts become incomplete due to the transaction cost in writing "a complete contingent contract":

> The difficult task facing the drafters of a contract is to anticipate and deal appropriately with the many contingencies ... Since it may be prohibitively costly to specify ... the parties are in practice likely to end up writing a highly incomplete contract (Hart and Moore, 1988:755).

Tirole, however, argues that "*indescribability of contingencies*" is not necessarily the major factor making contracts incomplete: "the indescribability of contingencies does not restrict the set of payoff outcomes that can be achieved through contract between parties" (Tirole, 1999:744).[5)]

5) Tirole extensively reviews core hypotheses of incomplete contracting and compare them as the benchmark with these of complete contracting and argues that incomplete contract theorists have thrown away complete contracting without exhausting the feasibility of complete contracting solution. He points out in a R&D game in which an agent makes unobserved efforts to produce innovation at stage 1 and she and a principal see at stage 2

In Hart's and Moore's terms, any member state in the eurozone is "locked-in to each other" once it accepts the terms of the monetary union, which all members have to make "relation-specific investments" to meet. Whether they have abided by these terms must be governed by "contractual provision" (Hart and Moore, 1988: 755). But the contractual provision, the SGP, is likely to be incomplete for the reasons raised by Hart and Moore above.

In addition, the European Court of Justice (the ECJ) has a tendency to avoid intervening in critical political matters, helping the no bail-out clause to be an incomplete contract. Though media repeatedly used the word bailout in reporting, the ECJ avoided using "the language of bailout" in order not to cause any further difficulty and to save the ESM. Craig observes:

> The interesting issue . . . was precisely how the ECJ would save the ESM from its alleged incompatibility with Article 125 TFEU (Craig, 2013:473).

2 Ex post inefficiency and renegotiation

It can be possible to deal with ex post inefficiency arising from unforeseen contingencies through ex post renegotiation. Since the state is ex post

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whether innovation has taken place or not: "A key point, though, is that with rational actors the contingencies are not unforeseen even though they cannot be described ex ante. One way of thinking about the problem is the parties envision the existence of $n \geq 1$possible techniques available at date 2, which, for want of a better description, they ex ante label 1 through n. The parties know that in case of 'innovation' one of the techniques will have value V for the principal and the other techniques no value, say. In the absence of innovation, none of the available techniques has any value to the principal" (Tirole, 1999: 745-6).Thus, he questions the relevance of indescribability of contingencies itself, while Hart and Moore consider it to be "the major 'transaction cost'" for making contracts incomplete(Hart and Moore, 1988:757).

already realized, what is necessary is to make a contract contingent on this realized state. Grossman and Hart point out that writing a contract under symmetric information is costless and leads to efficient allocation. They also point out: "The *distribution* of ex post surplus, however, will be sensitive to ownership right" because "each ownership structure will lead to (different) distortion in ex ante investment" (Grossman and Hart, 1988:696-7).

Once the state is realized, it enables the contracting parties to rewrite the contract by making it contingent on this realized state. Hart and Moore explain:

> Suppose that the states of the world ω are highly complex . . .
> it may be possible for the parties to revise and/or renegotiate the contract once ω is realized (Hart and Moore, 1988:756).

Bolton summarizes how contracting parties come to renegotiate the terms of an initial contract:

> [I]n order to achieve ex-ante efficiency one generally needs to specify ex-post outcomes that are Pareto-efficiency. This naturally creates the possibility of ex-post renegotiation, for once the contracting parties reach the point where an inefficient outcome is suggested by the contract (Bolton, 1990:304).

Aghion and Bolton similarly say:

> Note that since ex ante contracts are incomplete there may be room for Pareto-improving renegotiation once the parties learn the realization of θ [a state of nature] . . . they may wish to renegotiate

the initial contract (Aghion and Bolton, 1992:478-9).

In the eurozone, the no bail-out clause had been likely ex ante efficient, deterring any member state from taking prodigal fiscal policy. However, once Greece had fallen into sovereign debt crisis, holding on to the no bail-out clause became ex post inefficient. The eurozone states had to renegotiate and seek a way to prevent the Greek default from threatening the eurozone as a whole.

The drafters of the SGP, in the above sense, had not foreseen the Greek sovereign debt crisis and failed to "specify ex-post outcome that is Pareto-efficiency" in Bolton's terms.[6)]

3 Two incentives: "incentive compatib[ility]" and "renegotiation-proof"

Efficient contracts which involve renegotiation must meet two types of incentive. Contracts must be not only " 'incentive compatible' " but also " 'renegotiation-proof.' " As to the latter, Bolton points out : " When parties can commit not to renegotiate they have a choice of when to allow the renegotiation and when not" (Bolton, 1990: 303).

First, to meet incentive compatibility, a principal needs to provide an agent with sufficient incentive for the latter's effort so that the latter finds a contract incentive compatible for him.

Second, incentive for "re-negotiation-proof" is that a principal refuses a renegotiation offer from an agent when the realized state is good and that

6) Tirole shows in the R&D game that "specify[ing] ex post outcome" is possible despite the indescribability of contingencies: "Despite the indescribability of contingencies, the principal is able to obtain the same payoff outcome as when the innovation is ex ante describable" (Tirole, 1999:746).

the principal accepts a renegotiation offer from the agent when the realized state is bad and needs to provide incentive for the agent to make necessary investment to undo ex post inefficiency.

To induce the agent to make necessary investment, the principal has to make considerable monetary concession to the agent. For the agent, it is rational to make the needed investment to undo ex post inefficiency in exchange for the concession it gets. For the principal, undoing ex post inefficiency is rational even at the price of the concession it has to make in renegotiation.

4 Renegotiation-proof

Renegotiation, however, leads to yet another problem. Once the contracting parties permit renegotiation, they cannot commit "not to renegotiate" and "will have to abandon these contracts designed to be executed without renegotiation" (Bolton, 1990:304). Thus, "ex-post renegotiation hurts ex-ante efficiency" (Bolton, 1990:309). To deal with this problem of being unable to "commit not to renegotiate" (Bolton, 1990:304), now we have to put a mechanism into a contract which makes the contract to be renegotiation-proof.

We can write a renegotiation-proof contract once a state is realized. A state having already been realized, we now know what the realized state is. As explained earlier, we can write a contract contingent on the realized state. We can also make a contract to be renegotiation-proof because "the outcome of this renegotiation is perfectly predictable" (Bolton, 1990:303).

However, making the contract renegotiation-proof is costly. In an entrepreneur-investor game, the entrepreneur has a preference of continuation over liquidation of a project funded by the investor. On the other hand, the investor wants the entrepreneur to liquidate a project that

is in a bad state. In this conflict of interest, making concession in the good state is "excessive." The investor thus wants costly renegotiation only in the bad state (Bolton and Dewatripont, 2005:528-9).

By providing the entrepreneur with sufficient incentive, the investor can induce him to liquidate a project in a bad state. However, in a good state, the investor refuses any renegotiation offer from the entrepreneur. Since any renegotiation must be held only after both sides agree to renegotiate. Neither side can unilaterally demand renegotiation. And when both sides hold renegotiation on the basis of mutual agreement, it is Pareto improving.

5 Contingent allocation of control rights

Renegotiation in the preceding section is, however, a case of renegotiation via the Nash bargaining solution [the NBS] in which a principal and an agent share marginal surplus in the ratio of their bargaining powers. Here, marginal surplus means all additional surpluses added to their payoffs at the status quo point, the point where there is no agreement, by reaching an agreement in the NBS.

There is another renegotiation that is via a "take-it-or-leave-it" offer game. In the "take-it-or-leave-it" offer game, the principal takes all marginal surpluses (Binmore, 1998:21). The first Greek bailout was a case in which Greece had to accept all the demands and a harsh austerity program for debt repayment and economic reforms that had been made to them by the EU. This is because control rights are allocated in a state contingent way. Control rights take many forms. For example, "they can be contingent ("debtholders receive control if covenant X is violated" (Tirole, 2006:387).

As long as Greece remains solvent, it can maintain fiscal sovereignty.

Once it falls in default status and needs bailout, it has to yield fiscal sovereignty or control rights over its fiscal and economic policy to bailing-out institutions or the creditors.

Control rights thus shift to the bailing-out institutions in a state contingent way (Tirole, 2006:393-4; Bolton and Dewatripont, 2005:531-4).[7] Bolton and Dewatripont, and Aghion and Bolton state on this point in a similar manner (Bolton and Dewatripont, 2005:530) and (Aghion and Bolton, 1992:490).

Aghion and Bolton emphasize that contingent allocation of control is a special feature "associated with debt financing":

> By giving control to the investor when $s = 0$, the debt contract can limit the extent of rent extraction through expost renegotiation. At the same time, when $s = 1$, the investor cannot prevent the entrepreneur from obtaining his private benefits (Aghion and Bolton, 1992:486).

Here, $s = 1$ means that a publicly verifiable signal of the realized state in period 1 is good and $s = 0$ means that a publicly verifiable signal of the realized state in period 1 is bad (Aghion and Bolton, 1992:477-85, especially 477).

Contingent allocation of control also raises incentive for an agent to work hard in an attempt not to lose control. Tirole points out:"[T]he indirect effect [of the allocation of the control] refers to the motivational impact of the threat of losing control in case of bad performance"(Tirole, 2006:394).

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7) Tirole considers the allocation of control rights to be "the first theme" of incomplete contract theory: "The first theme . . . is *the allocation of property rights determines the bargaining powers in the ex post determination of the terms of trade* and that the holders of property rights are somewhat protected against the expropriation of their specific investment. Property rights thereby boost the holders' incentive to invest" (Tirole, 1999:749).

6 Hold-up problem

Contingent control right allocation leads to a "take-it-or-leave-it" offer game in debt financing. But the "take-it-or-leave-it" offer game involves an incentive problem. In this game, different from the NBS, the principal takes all marginal surpluses. It is all allocated to paying back debt to the principal, leaving no surplus for the agent. This leaves the agent lacking in any incentive for implementing the final contract, which includes harsh restructuring of its economy such as cutting back government spendings, raising taxes, privatizations, deregulation, and liberalization of the economy. All of these actions are quite unpopular and face strong opposition from the public. Any government would face extreme difficulty in carrying out any of these actions. Without sufficient incentive being provided for the agent to carry out reforms, the government will hold back on any reforms. Then, the final contract would be left to fail. A considerable reason for the failures of successive Greek bailouts since the initial bailout in 2010 has been this lack of proper incentive (Suzuki and Tsuranuki, 2015:1-12).

Tirole summarizes incomplete contract theory on the above point: "A second common theme is that the *exercise of property rights is limited by the indispensability of the other party in the ex post process* (Tirole, 1999:749). Therefore, "[i]n the R & D game, the buyer's indispensability limits the agent's share to 50%" (Tirole, 1999:749). In incomplete contract theory, in ex post renegotiation, if renegotiation is held via the NBS, marginal surpluses are divided between the agent and the principal based on their relative bargaining powers. If their bargaining powers are equal, the marginal surpluses are divided in half, with each party receiving 50 per cent.

7 The NBS and commitment problem

In renegotiation, switching from the "take-it-or-leave-it" offer game to the NBS can provide an agent with the necessary incentive to implement the reforms. But this in turn creates a commitment problem. Once any concession is made to a defaulting member state, other member states take their example into consideration and capitalize on it. This leads to a weakening in commitment to fiscal discipline. Further loosening of fiscal discipline may follow (Suzuki and Tsuranuki, 2015:11).

Based on the theoretical review above, in the following section, I conceptually apply incomplete contract theory to an analysis of the first Greek bailout in 2010.

Ⅳ Timeline of the first Greek bailout

Timeline of the first Greek bailout process in the eurozone:

signing an initial contract	flexibilisation of the initial contract	realized state	renegotiation over the terms of the initial contract	agent's investment, payoff realization and its division
t1	t1.5	t2	t3	t4

In the timeline above, t1.5 is added to the standard format of timeline of incomplete contract, considering the unique case in the eurozone fiscal governance.

Ⅴ t1: Signing the initial contract

The principal is the Commission, representing the EU. The agent is Greece. They sign an initial contract at t1. The contract is to comply with the SGP rules. That means that Greece cannot exceed the budget deficit limit of 3 per cent of GDP and the debt limit of 60 per cent of GDP and must bring the budget deficit close to balance or change it to a surplus in the mid-term convergence program.

Any eurozone state would be placed in the excessive deficit procedures (the EDP) if it exceeds the 3 per cent budget deficit limit and fails to correct it after being recommended to do so within the specified time limit from the Commission. If the member state still fails to correct its budget deficit, it will be assessed a fine in the amount of 0.2per cent[8] of GDP in the maximum by the adoption of the Commission's recommendation at the Council by the qualified majority voting (the QMV).

Together with the no bail-out clause, these collective guidance and preventive measures were expected to prevent any member state from exceeding the 3 per cent deficit limit. It goes without saying that all member states were expected to not fall into default. (In this sense, the no bail-out seems to have been close to the concept of social contract on which basis all eurozone states coordinate their fiscal policies (see social contracts, Binmore, 1998:4-11)).

Verdun, for example, points out:

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8) The European Commission said in connection with Spain's and Portugal's violation of the EU fiscal rules on July 6, 2016: "... there is a strong chance the EU will set any fines at a nominal or even zero level." This suggests that fines to be imposed would actually start at zero or a nominal level. Jim Brunsden and Tobias Buck, "Spain and Portugal head for EU clash," *the FT*, 6 July 2016, p. 3.

> The creators of the euro had put their confidence in a so-called 'no bail out clause' and rules that would ensure that budgetary deficits and public debt of member states would not exceed ceilings (Verdun, 2012:117).

Saden similarly emphasizes the EU leaders' reliance on the no bail-out clause:

> The 1992 Maastricht Treaty . . . specifically ruled out mutual guarantees for member governments' debts ('bail-out') (Saden, 2012: 121).

Preventing default by any eurozone state might be close to what Tirole calls a status quo project:

> The organization can implement a status quo project 0 that yields known profit $B_0 > 0$ together with a private benefit $b_0 > 0$ to the agent. This status quo may be interpreted either as "doing nothing" . . . or as "pursuing current policy" or "renewing last years' budget" (Tirole, 1999:766-7).

So long as eurozone states kept the status quo project 0 and did not deviate too egregiously from the budget deficit limit of 3 per cent of DP, Greece would not have faced a sovereign debt crisis. If and only when their egregious deviation occurred, the Commission and the agent proceeded to t 2, the state realized.

What kind of give-and-take game exists between the principal, the Commission, and an agent, each member state (e.g. Greece), corresponding

to an investor and an entrepreneur relationship in which the former provides funding for a project and the latter provides returns to the principal and other interested parties? The eurozone membership enables Greece to keep yield on its sovereign bords as low as yield on German Bunds. In return for receiving the same credit ratings in sovereign bonds markets, Greece is expected to maintain fiscal discipline.

If spread between yield on the German Bunds and yield on Greek sovereign bonds remains marginal or small, there is no problem. But once Greece loosens its fiscal discipline, the spread widens. Then, it calls in speculative attacks on Greek bonds based on expectation that Greece might be forced out of the eurozone. Speculative attacks on other weaker economies in the eurozone might follow, threatening the eurozone as a whole.

Ⅵ t1.5: "Flexibilisation" of the SGP

After the introduction of the euro in 1999, in November 2003, Germany and France, exceeding the budget deficit limit and being placed under the EDP, faced the recommendation of fine against each by the Commission at the Council. However, the recommendations against them looked likely not to gather a qualified majority voting at the Council. They were suspended. This is said to have led to "severe weakening by Regulations" (Blanke, 2012: 399).

Following this, in 2005, the SGP regulations were revised. Under the revised regulations, in setting the medium-term budgetary objective, consideration was said to be given to the diversity in economic and budgetary positions "as well as of risk to the sustainability of public finance" of individual member states (Blank, 2012: 399).

When the global financial crisis hit the eurozone, this loosening of the SGP rules led to a dramatic rise in deficit in the eurozone, from close to zero in 2007 to an estimated 7 per cent of GDP in 2008 (Blank, 2012:400).

Ⅶ t2: Realized state

In 2009, the newly elected Greek government disclosed false reporting of its budget deficit, which actually amounted to nearly13 per cent of GDP. Greece soon came under speculative attacks in financial markets, which judged its high deficit and high debts to be unsustainable (Verde, 2011:144-5). Greece thus faced sovereign default, being unable to raise money in bond markets. This was the realized state despite the SGP rules including the no bail-out clause.

Ⅷ t3: Renegotiation and signing the final contract

How did the European Council respond to the Greek financial crisis? In this process, the social contract (Binmore, 1998; 4-9) in the eurozone shifted from non-bailing out to bailing out.

1 Built-in parameter for policy shift

Two conflicting clauses are incorporated in the SGP. One is Article 125 TFEU. The other is Article 122(2) TFEU. Between the two conflicting clauses, a certain parameter is built in. It is the systemic risk parameter. There are certain indicators of systemic risk. For example, the spread between German Bunds and Greek sovereign bonds is one of such indexes.

The spread refers to the difference in yields each country has to pay on its bonds. Greece has to pay the spread to investors so that it can attract

them into investing in riskier Greek bonds rather than safer German Bunds. Unless the spread is high enough, they switch to German Bunds for safer investments. However, once the spread rises to a certain critical level, markets judge that Greece is no longer able to pay back its debts. Then, investors sell off Greek bonds, making Greece no longer able to raise needed money in financial markets. Greece thus faced default in early 2010.

Credit default swap (CDS) is also another indicator. It is widely said that if CDS against certain sovereign bond defaults reaches certain points, the state issuing the bonds faces default risk.

As Verde points out, "[f]oreign investors soon" reached "a consensus on what to do: get rid of" Greek from bond markets (Verde, 2011:144-5).The Greek crisis had the potential to spread into other weak states such as Portugal, Spain and Italy, posing systemic risk.

This was the situation that the EU leaders faced. In response to shift in parameter from merely deterring any member state from prodigal fiscal policy to staving off the more ominous risk, the systemic risk, the EU leaders changed their position. Verde summarizes this shift:

> First, the treaty explicitly ruled out any hypothesis of bailout . . . The German stance on Greece bailout eventually changed quite radically after pressure from the Obama administration and this allowed EU-ECB-IMF to approve the rescue plan which had the merit of lessening the gravity of the crisis (Verde, 2011:146).

2 Reinterpretation of Article 125 TFEU

Then, how had they made this shift compatible with the no bail-out clause or Article 125TFEU? Louis points out one exception being attached

to Article 125 TFEU (Louis, 2011: 977). It is the case "[w]here a Member State is in difficulties or is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control" (cited in Louis, 2010:981).

Louis argues that Article 122 (2) TFEU, cited above, constitutes a "'counterweight' to the no bailout-clause" of Article 125 (1) TFEU and "must be interpreted" in that way (Louis, 2010:983).

Herdegen similarly argued well before the Greek crisis:

> [T]he no bail-out provision of the EC Treaty cannot sweep away the fact that the euro area will constitute a solidarity compact, the members of which are under *de fact* obligation to rescue defaulting partners" (Herdegen, 1998:22).

> This [the no bail-out clause], however, does not rule out the possibility that the Community and national authorities will yield to pressure to rescue a Member State unable to serve its government debts (Herdegen, 1998:26).

Tuori further argues that the no bail-out clause should be subject to such necessity as preventing the euro system from collapsing as a whole:

> . . . the more general objective of the regulative whole Art 125 (1) is part of it. And this 'second-order' telos of the no-bailout-clause undoubtedly includes the financial stability of the euro area as a whole (cited in Craig, 2013:474).

Craig too similarly argues in relation with the European Financial Stabili

zation Mechanism (EFSM):

> While some commentators questioned whole Article 122 (2) TFEU provided a valid base for the EFSM, it can be interpreted so as to legitimate the assistance (Craig, 2013:466).

Verde pushes the above point further that neither the ECB nor other member states can stand idle without "rescuing" any member state "under attack and impaired access to private credit." As the reason for it, he points out that through heavy exposure of financial institutions of other member states to securities issued by the member state in severe financial difficulties, the "generalized financial crash" would ensue and "could result in the end of the Monetary Union" (Verde, 2011:155).

3 Clearing Article 126 TFEU

However, the EU financial assistance must also clear Article 126 TFEU on excessive deficits. With respect to excessive deficit problems, Article 126 TFEU provides "a special procedure to be applied" (Louis, 2010:984). If any issue has to be covered by Article 122 (2), it should be the case to be covered by other than Article 126 TFEU.

To allow such a measure, Article 122 (2) TFEU stipulates that the case must be with "severe difficulties" and must be a situation "seriously threatened with severe difficulties." Therefore, "[t]he occurrence has to be exceptional and not manageable under other Treaty provisions" (Louis, 2010:984). Furthermore, an excessive deficit problem "*per se*" does not qualify any EU's or member states' financial assistance "because a debt problem derives from the cumulative effect of the decisions of the State concerned" (cited from Louis, 2010:984, footnote no. 48). For justification,

as such "severe difficulties" stipulated in Article 122 (2) TFEU, the Council had to bring contagious risk, i.e. spillover of the Greek crisis to other eurozone member states such as Ireland, Portugal, Spain and Italy (Louis, 2010:984).

4 Moving to a new equilibrium

Article 125 TFEU prohibits financial assistance to any member state. However, if the situation develops into "an asymmetric shock or a shock common to a number of Member States," in such a case regardless of its origin, "a derogation to Article 125" could be justifiable (Louis, 2010: 984). Louis pointed out: "It became clear for Greece's partners that it could not be left on its own, for the sake of the stability of the euro area, and that letting a euro area member default as a 'solution' was not an acceptable one" (Louis, 2010:985).

Since this was the measure to cope with an exceptional risk, the measure should be "temporary." It must end when the situation is stabilized (Louis, 2010:985).

5 Signing the final contract

Renegotiation was held between the EU and Greece over the terms of the initial contract. In May 2010, the Council decided to bail out Greece. Since Greece went bankrupt financially, it had to yield control rights over its finances as the entrepreneur-investor game suggests. The terms on bailing out were thus set via a "take-it-or-leave-it" offer game.

In exchange for being bailed out, Greece promised to implement economic reforms including cutting expenditures drastically, labor reforms, privatization and other measures.

Since the state was already realized, the contract such as reimbursement

of bailout money to Greece could be made contingent on Greece's implementation of the promised reforms. Under the terms, reimbursements were made quid pro quo for Greece's implementation of the promised reforms. Although there has been considerable moral hazard on the Greek side and although Greece's implementation of reforms has been half-hearted, the reforms seem to have been considerably carried out.

Ⅸ Payoff realization and its division

What was payoff realization? For the EU, the spillover to other weaker economies or the systemic risk was prevented. For Greece, it was being able to avoid disastrous default.

9) Louis summarizes the rescue package:
"The acceleration . . . of the crisis to other euro area Member States . . . , prompted an extraordinary meeting of the Ecofin Council, on 9/10 May. As a follow-up to an improvised Summit of the euro area Member States on 7/8 May, the Ecofin Council was to provide for a European stabilization mechanism including:
— a 'European financial stabilization mechanism', created . . . based on Article 122 (2) TFEU . . . which could mobilize up to 60 billion euros . . . subject to strong conditionality . . .
— an intergovernmental agreement . . . called the 'European Financial Stability Facility (EFSF). . . provide loans . . . up to 440 billion euro, the IMF participating in financial arrangements by providing . . . 250 billion euro, bringing the total to 750 billion euro." (Louis, 2010: 973-974).

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